Programme Specifications

- Postgraduate Diploma / MSc*

PLEASE NOTE. This specification provides a concise summary of the main features of the course and the learning outcomes that a typical student might reasonably be expected to achieve and demonstrate if he or she takes full advantage of the learning opportunities provided.

The additional requirements for the award of the MSc are noted with an asterisk *

1 AWARDING INSTITUTION/BODY UNIVERSITY OF ULSTER
2 TEACHING INSTITUTION UNIVERSITY OF ULSTER
3 LOCATION Jordanstown
4 COURSE ACCREDITED BY
5 FINAL AWARD PgDip/MSc in Web Information Systems
6 MODE OF ATTENDANCE Full-Time / Part-Time
7 SPECIALISMS Information Systems
8 COURSE CODES E487PJ/E488PJ / E987PJ/E988PJ
9 HESA CODE G450
10 EDUCATIONAL AIMS AND OBJECTIVES OF THE COURSE

The main purpose of the course is to provide graduates from many backgrounds with the opportunity to obtain or develop computing skills that are relevant to modern organisations and professions. This is particularly true of the business and organisational skills that relate to web-based systems. This course provides postgraduate education and training for both non-computing graduates and for graduates with more developed computing knowledge, in the concepts and methods of information systems and how they meet the needs of the commercial, industrial, public sectors and research degree preparation.

The specific aims of the course are to:

- introduce students to the role, scope and potential of web information systems;
- engender a systematic understanding of knowledge, and a critical awareness of current issues at the forefront of web information systems;
- foster originality together with a practical understanding of how established techniques of research can be applied to information systems;
- instil a professional attitude to employment in the computing industry;
- to critically evaluate current research and advanced scholarship in information systems*.

The objectives of the courses are to enable students to have:

- an understanding of the fundamental principles underpinning the discipline of web information systems;
- competence in the use of a range of computing tools and technologies related to web information systems;
- critical evaluation and use of a range of computing tools and technologies related to web information systems*;
- the ability to identify, specify and design correct information systems to satisfy the needs of commercial, industrial or administrative organisations;
- the capability to deal with complex issues both systematically and creatively in relation to the developments in software methodologies, technologies and standards for web information systems;
- good verbal and oral communication skills, with the ability to function as part of a team;
- a professional attitude with well developed responsible ethics, for pursuit of a career in the information technology industry;
- cognisance of the impact of computing on the individual and society.
11 A MAIN LEARNING OUTCOMES

Knowledge and Understanding

This course provides opportunities for students to achieve and demonstrate the following learning outcomes:

A1 a comprehensive understanding of the fundamental concepts, principles, theories and practices underlying computing as an academic discipline and as a business and industrial tool.

A2 recognise and analyse criteria and specifications appropriate to specific problems and plan strategies for their implementation.

A3 employ effectively practices and tools for the specification, design, implementation and critical evaluation of computer applications.

A4 analyse the extent to which a computer-based system meets the criteria defined for its current deployment and future evolution.

A5 communicate effectively, ideas proposals and designs to a range of audiences, using rational and reasoned arguments either orally, written or electronically.

A6 understand the professional, legal, moral and ethical issues involved in the exploitation of computer technology.

Learning and Teaching Methods that will enable the outcomes to be achieved:
Lectures, tutor directed tutorials and supervised practical sessions.

Assessment Methods that enable the outcomes to be demonstrated:
Coursework, written unseen examinations.

11 B Skills and other Attributes

B1 the ability to specify, design and construct computer-based systems.

B2 the ability to evaluate such systems with respect to general quality and possible trade-offs within the parameters of the problem.

B3 the ability to assess the implications, and consequences of applying a computing based solution to a selected application domain.

B4 the ability to determine the correctness of a particular solution with regard to the specified functionality.

Learning and Teaching Methods that will enable the outcomes to be achieved:
Lectures, tutor directed tutorials, supervised practical sessions and self-directed learning employing study packs and research based materials.

Assessment Methods that enable the outcomes to be demonstrated:
Coursework related to case studies and projects, written unseen examinations, workbooks, project reports and dissertation.
### 11 C Practical skills

<p>| | |</p>
<table>
<thead>
<tr>
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<tbody>
<tr>
<td><strong>C1</strong></td>
<td>the ability to work effectively as part of a team.</td>
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<td><strong>C2</strong></td>
<td>the ability to select and use appropriate hardware and software, recognising its logical and physical properties.</td>
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<td><strong>C3</strong></td>
<td>the ability to comprehend the complete engineering process involved in the effective deployment of computers to solve practical problems.</td>
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<td><strong>C4</strong></td>
<td>the ability to deploy effectively computer based tools towards the construction and documentation of computer applications.</td>
</tr>
<tr>
<td><strong>C5</strong></td>
<td>the ability to write reports, using complex arguments, for various audiences including management, technical, users or the academic community.</td>
</tr>
<tr>
<td><strong>C6</strong></td>
<td>undertake a substantial piece of work in an area at the forefront of research or practice in applying computer science to business systems, to report professionally on the work which will have an original component*.</td>
</tr>
</tbody>
</table>

**Learning and Teaching Methods that will enable the outcomes to be achieved:**
- Lectures, tutor directed tutorials, problem based seminars and practical sessions.

**Assessment Methods that enable the outcomes to be demonstrated:**
- Problem based coursework, project reports and dissertation.

### 11 D Transferable / Key skills

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<tr>
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<tr>
<td><strong>D1</strong></td>
<td>the ability to learn in both familiar and unfamiliar situations making effective use of information-retrieval skills and of learning resources.</td>
</tr>
<tr>
<td><strong>D2</strong></td>
<td>the ability to communicate effectively using various media and with a variety of audiences.</td>
</tr>
<tr>
<td><strong>D3</strong></td>
<td>effective use of general Information Technology facilities.</td>
</tr>
<tr>
<td><strong>D4</strong></td>
<td>be conscious of the need for continuing professional development in recognition of the requirement for Life Long Learning.</td>
</tr>
<tr>
<td><strong>D5</strong></td>
<td>demonstrate self-direction and originality in tackling and solving problems, and act autonomously in planning and implementing tasks at a professional or equivalent level*.</td>
</tr>
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**Learning and Teaching Methods that will enable the outcomes to be achieved:**
- Lectures, tutor directed tutorials, seminars and practical sessions.

**Assessment Methods that enable the outcomes to be demonstrated:**
- Assessments, project vivas, reports and dissertation.
12 PROGRAMME STRUCTURE AND REQUIREMENTS FOR THE AWARD

This programme may be studied full-time over a period of one year. The learning is divided into study units called modules. Most modules have a credit value of 15 credits while the Research Methods and Research Study module has a credit value of 60 credit points. The credit weighting of a module is in proportion to the effort required from the student, thus a 15 point module corresponds to 150 hours of notional learning time including lectures, tutorials, seminars, coursework, assignment work and self-study. The modules are arranged with 60 credit points being presented in each semester. The credit ratings and awards that may be gained are shown below.

<table>
<thead>
<tr>
<th>Module Code</th>
<th>Module Title</th>
<th>Credit Level</th>
<th>Credit Points</th>
<th>Core or Option</th>
</tr>
</thead>
<tbody>
<tr>
<td>COM900J1</td>
<td>Professional Systems Development</td>
<td>M</td>
<td>15</td>
<td>C</td>
</tr>
<tr>
<td>COM822J1</td>
<td>Software Project Management &amp; Quality Control</td>
<td>M</td>
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<td>Information Resource Management</td>
<td>M</td>
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</tr>
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<td>COM614J1</td>
<td>Databases and Web Programming 1</td>
<td>3</td>
<td>15</td>
<td>C</td>
</tr>
<tr>
<td>COM902J2</td>
<td>Computer Networks</td>
<td>M</td>
<td>15</td>
<td>C</td>
</tr>
<tr>
<td>COM615J2</td>
<td>Databases and Web Programming 2</td>
<td>3</td>
<td>15</td>
<td>C</td>
</tr>
<tr>
<td>COM839J2</td>
<td>Intelligent Systems</td>
<td>M</td>
<td>15</td>
<td>O</td>
</tr>
<tr>
<td>BMG890J2</td>
<td>E-Business</td>
<td>M</td>
<td>15</td>
<td>O</td>
</tr>
<tr>
<td>BMG919J2</td>
<td>Innovation and Entrepreneurship</td>
<td>M</td>
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</tr>
<tr>
<td>COM874J2</td>
<td>Intelligent Agents and Knowledge Management</td>
<td>M</td>
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<td>O</td>
</tr>
<tr>
<td>COM834J2</td>
<td>Internet Technologies: Infrastructure</td>
<td>M</td>
<td>15</td>
<td>O</td>
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<tr>
<td>COM903J2</td>
<td>Document Engineering</td>
<td>M</td>
<td>15</td>
<td>O</td>
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</tbody>
</table>

Potential award
PgDip in Web Information Systems (120 credit points) after completing 6 core modules and 2 options.
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<td>M</td>
<td>15</td>
<td>O</td>
</tr>
<tr>
<td>COM904J4</td>
<td>Research Methods and Research Study</td>
<td>M</td>
<td>60</td>
<td>C</td>
</tr>
</tbody>
</table>

**Potential award**

MSc in Web Information Systems (180 credit points) after completing 6 core modules, 2 options and the Research Methods and Research Study module.

13 **SUPPORT FOR STUDENTS AND THEIR LEARNING**

- Induction course, introducing curriculum and practitioner skills
- Student handbook and modules guide
- Online library resource packs
- Extensive library and other learning resources
- Intranet with a wide range of learning support material
- Course specific texts, learning packs and resource tools offered online
- Student e-mail accounts and full access to the Internet
- Each student is allocated a Year Tutor
- Formative assessment to enhance student feedback and learning through online environment
14 CRITERIA FOR ADMISSION
Candidates must be able to satisfy the general admissions requirements of the university in one of the following ways:

- a minimum of a 2:2 Honours degree from a University of the United Kingdom or the Republic of Ireland, from the Council for National Academic Awards, the National Council for Educational Awards, or from an institution which is recognised by the Senate for this purpose; or

- an equivalent standard in a Postgraduate Certificate, Graduate Diploma, Graduate Certificate or an approved professional or other qualification; and

- provide evidence of competence in written and spoken English (GCSE grade C or equivalent);

Admission to this linked series of postgraduate courses is normally to the Postgraduate Diploma in Web Information Systems.

15 METHODS FOR EVALUATING AND IMPROVING THE QUALITY AND STANDARDS OF TEACHING AND LEARNING
Mechanisms for review and evaluation of teaching, learning, assessment, the curriculum and outcome standards:
- module reviews (student questionnaires and teaching team report)
- annual subject review prepared by the course director
- annual staff reviews
- periodic review involving both internal and external academic panel members.

Committees with responsibility for monitoring and evaluating quality:
- Student-Staff Consultative Committee
- Course committee
- Board of Examiners
- School Board (includes student members)
- Faculty Teaching and Learning Committee (includes student members)
- University Teaching and Learning Committee.

Mechanisms for gaining student feedback on the quality of their learning experience:
- Student-Staff Consultative Committee
- Student representatives on School and Faculty boards
- Module evaluation questionnaires / module forum / module freeform responses.

Staff development includes:
- Continuous training through vocational assessment centre to ensure authenticity and quality of assessment practices
- Updating in the subject through research and scholarship.
16 Regulation of standards

Assessment rules
The pass mark shall be 50% for each assessment element and in the module overall. Examination: Coursework weighting is specific to each module and full details are available as set out in each module booklet.

Mark ranges used for classification of PgCert and PgDip
The following shall be the minimum percentages acceptable in determining the overall grades of candidates.

Pass with Commendation  60%
Pass                    50%

The Board of Examiners shall recommend the award of a Pass with Commendation to a candidate who achieves an overall mark of at least 60%, provided that a module mark of at least 60% has been achieved in modules amounting to 60 credit points for the Postgraduate Diploma.

The Postgraduate Certificate is normally only an exit award.

Mark ranges used for classification of Masters Degree
Postgraduate Diploma candidates who obtain an overall mark of 50% or more may, at the discretion of the Board of Examiners, progress to the Master's stage.

The following shall be the minimum percentages acceptable in determining the overall grades of candidates.

Pass with Distinction  70%
Pass                   50%

MSc Pass and Distinction
The Board of Examiners shall recommend the award of a Pass with Distinction to a candidate who achieves an overall average of 70% or more, with a mark of at least 70% being achieved in modules amounting to at least 90 credit points, including the Research Methods and Research Study.

Candidates who fail the Research Methods and Research Study and have passed the taught modules may be assessed for the award of a Postgraduate Diploma.

Candidates registered on linked postgraduate courses shall receive only one award at the highest level during a period of continuous registration.

Role of the external examiner
An External Examiner, is appointed by the Faculty Teaching and Learning Board, and reports annually to the University.

The role of the External Examiner is to report on quality and standards of the course so that the validity of the degrees that are awarded can be maintained.

The full roles and responsibilities are set out in the university’s Handbook for External Examiners.

External Examiners are given training on appointment.
17 Indicators of quality and standards

Many Faculty members are also members of the Institute of Learning and Teaching. A number of staff have received the University’s Distinguished Teaching Award. Research Assessment Exercise HEFCE rating of 4. External funding for learning and teaching initiatives of the order of £200,000. The Faculty hosts the LTSN centre for computing. The faculty also hosts the Centre for Software Process Technologies with a brief to vitalise the software industry in Northern Ireland by engaging in ‘applied research with commercial software development organisations to improve the efficiency, effectiveness and quality of their processes and products’ (http://www.infc.ulst.ac.uk/informatics/cspt/aboutCSPT.html). The teaching of software engineering benefits directly from the expertise available in the centre.
- Postgraduate Certificate

PLEASE NOTE. This specification provides a concise summary of the main features of the course and the learning outcomes that a typical student might reasonably be expected to achieve and demonstrate if he or she takes full advantage of the learning opportunities provided.

The PgCert is normally reserved as an exit award.

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<td><strong>COURSE ACCREDITED BY</strong></td>
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<td><strong>5</strong></td>
<td><strong>FINAL AWARD</strong></td>
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<td><strong>6</strong></td>
<td><strong>MODE OF ATTENDANCE</strong></td>
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<td><strong>7</strong></td>
<td><strong>SPECIALISMS</strong></td>
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<td></td>
<td>Information Systems</td>
</tr>
<tr>
<td><strong>8</strong></td>
<td><strong>COURSE CODES</strong></td>
</tr>
<tr>
<td></td>
<td>E486PJ / E986PJ</td>
</tr>
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**10 EDUCATIONAL AIMS AND OBJECTIVES OF THE COURSE**

The main purpose of the course is to provide graduates from many backgrounds with the opportunity to obtain or develop computing skills that are relevant to modern organisations and professions. This is particularly true of the business and organisational skills that relate to web-based systems. This course provides postgraduate education and training for both non-computing graduates and for graduates with more developed computing knowledge, in the concepts and methods of information systems and how they meet the needs of the commercial, industrial, public sectors.

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- instil a professional attitude to employment in the computing industry.

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- an understanding of the fundamental principles underpinning the discipline of web information systems;
- competence in the use of a range of computing tools and technologies related to web information systems;
- the ability to identify, specify and design correct information systems to satisfy the needs of commercial, industrial or administrative organisations;
- good verbal and oral communication skills, with the ability to function as part of a team;
- a professional attitude with well developed responsible ethics, for pursuit of a career in the information technology industry;
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This course provides opportunities for students to achieve and demonstrate the following learning outcomes:

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A2 recognise and analyse criteria and specifications appropriate to specific problems and plan strategies for their implementation.
A3 employ effectively practices and tools for the specification, design, implementation and critical evaluation of computer applications.
A4 analyse the extent to which a computer-based system meets the criteria defined for its current deployment and future evolution.
A5 communicate effectively, ideas proposals and designs to a range of audiences, using rational and reasoned arguments either orally, written or electronically.
A6 understand the professional, legal, moral and ethical issues involved in the exploitation of computer technology.

Learning and Teaching Methods that will enable the outcomes to be achieved:
Lectures, tutor directed tutorials and supervised practical sessions.
Assessment Methods that enable the outcomes to be demonstrated:
Coursework, written unseen examinations.

11 B Skills and other Attributes

B1 the ability to specify, design and construct computer-based systems.
B2 the ability to evaluate such systems with respect to general quality and possible trade-offs within the parameters of the problem.
B3 the ability to assess the implications, and consequences of applying a computing based solution to a selected application domain.
B4 the ability to determine the correctness of a particular solution with regard to the specified functionality.

Learning and Teaching Methods that will enable the outcomes to be achieved:
Lectures, tutor directed tutorials, supervised practical sessions and self-directed learning employing study packs.
Assessment Methods that enable the outcomes to be demonstrated:
Coursework related to case studies and projects, written unseen examinations, workbooks.
11 C Practical skills

C1 the ability to work effectively as part of a team.

C2 the ability to select and use appropriate hardware and software, recognising its logical and physical properties.

C3 the ability to comprehend the complete engineering process involved in the effective deployment of computers to solve practical problems.

C4 the ability to deploy effectively computer based tools towards the construction and documentation of computer applications.

C5 the ability to write reports, using complex arguments, for various audiences including management, technical, users or the academic community.

Learning and Teaching Methods that will enable the outcomes to be achieved:
Lectures, tutor directed tutorials, problem based seminars and practical sessions, Project preparation and implementation.

Assessment Methods that enable the outcomes to be demonstrated:
Problem based coursework, project reports and dissertation.

11 D Transferable / Key skills

the ability to learn in both familiar and unfamiliar situations making effective use of information-retrieval skills and of learning resources.

D1 the ability to communicate effectively using various media and with a variety of audiences.

D2 effective use of general Information Technology facilities.

D3 be conscious of the need for continuing professional development in recognition of the requirement for Life Long Learning.

Learning and Teaching Methods that will enable the outcomes to be achieved:
Lectures, tutor directed tutorials, seminars and practical sessions.

Assessment Methods that enable the outcomes to be demonstrated:
Problem based coursework and project reports.
12 PROGRAMME STRUCTURE AND REQUIREMENTS FOR THE AWARD

This programme may be studied full-time over a period of one year. The learning is divided into study units called modules. All modules have a credit value of 15 credits points. The credit weighting of a module is in proportion to the effort required from the student, thus a 15 point module corresponds to 150 hours of notional learning time including lectures, tutorials, seminars, coursework, assignment work and self-study. The modules are arranged with 60 credit points being presented in each semester. The credit ratings and awards that may be gained are shown below.

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<td>Databases and Web Programming 1</td>
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<td>15</td>
<td>C</td>
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</tr>
</tbody>
</table>

Potential award
PgCert in Web Information Systems (60 credit points) after completing a minimum of 4 modules that must include at least 2 core modules. A maximum of 1 module can be at level 3.

13 SUPPORT FOR STUDENTS AND THEIR LEARNING

Induction course, introducing curriculum and practitioner skills
Student handbook and modules guide
Online library resource packs
Extensive library and other learning resources
Intranet with a wide range of learning support material
Course specific texts, learning packs and resource tools offered online
Student e-mail accounts and full access to the Internet
Each student is allocated a Year Tutor
Formative assessment to enhance student feedback and learning through online environment
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- an equivalent standard in a Postgraduate Certificate, Graduate Diploma, Graduate Certificate or an approved professional or other qualification; and

- provide evidence of competence in written and spoken English (GCSE grade C or equivalent);

Admission to this linked series of postgraduate courses is normally to the Postgraduate Diploma in Web Information Systems.

15 METHODS FOR EVALUATING AND IMPROVING THE QUALITY AND STANDARDS OF TEACHING AND LEARNING
Mechanisms for review and evaluation of teaching, learning, assessment, the curriculum and outcome standards:

- module reviews (student questionnaires and teaching team report)
- annual subject review prepared by the course director
- annual staff reviews
- periodic review involving both internal and external academic panel members.

Committees with responsibility for monitoring and evaluating quality:

- Student-Staff Consultative Committee
- Course committee
- Board of Examiners
- School Board (includes student members)
- Faculty Teaching and Learning Committee (includes student members)
- University Teaching and Learning Committee.

Mechanisms for gaining student feedback on the quality of their learning experience:

- Student-Staff Consultative Committee
- Student representatives on School and Faculty boards
- Module evaluation questionnaires / module forum / module freeform responses.

Staff development includes:

- Continuous training through vocational assessment centre to ensure authenticity and quality of assessment practices
- Updating in the subject through research and scholarship.
16 Regulation of standards

Assessment rules
The pass mark shall be 50% for each assessment element and in the module overall. Examination: Coursework weighting is specific to each module and full details are available as set out in each module booklet.

Mark ranges used for classification of PgCert
The following shall be the minimum percentages acceptable in determining the overall gradings of candidates.

Pass with Commendation  60%
Pass  50%

The Board of Examiners shall recommend the award of a Pass with Commendation to a candidate who achieves an overall mark of at least 60%, provided that a module mark of at least 60% has been achieved in modules amounting to 30 credit points for the Postgraduate Certificate.

The Postgraduate Certificate is normally only an exit award.

A candidate who fails to satisfy the requirements for the Diploma will be awarded a Postgraduate Certificate after completing a minimum of 4 modules that must include at least 2 core modules. A maximum of 1 module can be at level 3; otherwise they will be required to withdraw from the course, or (exceptionally) from the university.

Candidates registered on linked postgraduate courses shall receive only one award at the highest level during a period of continuous registration.

Role of the external examiner
An External Examiner, is appointed by the Faculty Teaching and Learning Board, and reports annually to the University.

The role of the External Examiner is to report on quality and standards of the course so that the validity of the degrees that are awarded can be maintained.

The full roles and responsibilities are set out in the university’s Handbook for External Examiners.

External Examiners are given training on appointment.

17 Indicators of quality and standards

Many Faculty members are also members of the Institute of Learning and Teaching. A number of staff have received the University’s Distinguished Teaching Award Research Assessment Exercise HEFCE rating of 4 External funding for learning and teaching initiatives of the order of £200,000. The Faculty hosts the LTSN centre for computing. The faculty also hosts the Centre for Software Process Technologies with a brief to vitalise the software industry in Northern Ireland by engaging in ‘applied research with commercial software development organisations to improve the efficiency, effectiveness and quality of their processes and products’ (http://www.inf.c-ulst.ac.uk/informatics/cspt/aboutCSPT.html). The teaching of software engineering benefits directly from the expertise available in the centre.
| Module Title                                      | Module Code | A1 | A2 | A3 | A4 | A5 | A6 | B1 | B2 | B3 | B4 | C1 | C2 | C3 | C4 | C5 | C6* | D1 | D2 | D3 | D4 | D5* |
|--------------------------------------------------|-------------|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| Professional Systems Development                  | COM900J1    |    |    |    |    |    |    | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  |
| Software Project Management & Quality Control     | COM822J1    | ✓  | ✓  | ✓  |    | ✓  | ✓  |    | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  |
| Information Resource Management                   | COM901J1    | ✓  | ✓  | ✓  | ✓  |    | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  |
| Databases and Visual Programming 1                | COM614J1    | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  |
| Computer Networks                                 | COM902J2    | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  |
| Databases and Visual Programming 2                | COM615J2    | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  |
| Intelligent Systems                               | COM839J2    | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  |
| E-Business                                        | BMG890J2    | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  |
| Innovation and Entrepreneurship                   | BMG919J2    | ✓  |    | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  |
| Intelligent Agents and Knowledge Management       | COM874J2    | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  |
| Internet Technologies: Infrastructure             | COM834J2    | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  |
| Document Engineering                              | COM903J2    | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  |
| Research Methods and Research Study               | COM904J4    | ✓  |    | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  |

*Indicates that Learning Outcome C6 and D5 are assessed as part of the PgDip and MSc Programme Specifications.